CLAIMS

What is claimed is:

1. A method for aligning images, comprising:

identifying a feature of interest in a first image;

identifying a corresponding feature of interest in a second image;

registering the feature of interest within the first image with the corresponding feature of interest within the second image; and

storing registration data corresponding to registration.

2. The method of claim 1, further comprising displaying the registration data.

3. The method of claim 2, wherein displaying the registration data comprises displaying a cine serial view of the first image and the second image.

4. The method of claim 2, wherein displaying the registration data comprises displaying an overlay of the first image and second image in stack mode.

5. The method of claim 2, wherein displaying the registration data comprises displaying a composite image of the first image and the second image.

6. A method for registering images, comprising:

segmenting a feature of interest in a first image;

segmenting a corresponding feature of interest in a second image;

registering the first image with the second image by aligning the feature of interest with the corresponding feature of interest; and

storing image data corresponding to registration.

7. The method of claim 6, wherein the first image and second image are acquired in different temporal settings.

8. The method of claim 6, wherein the first image and second image are acquired by the same modality.

9. The method of claim 6, wherein the first image and second image are acquired by different modalities.

10. The method of claim 6, wherein the first image and second image are X-ray images.

11. The method of claim 6, further comprising displaying the image data corresponding to registration.

12. The method of claim 11, wherein the image data is displayed in at least one of a cine serial display, an overlay in stack mode, and a composite image.

13. A method for registering images, comprising:

segmenting a feature of interest in a first image;

segmenting a corresponding feature of interest in a second image;

determining a first reference point on the feature of interest in the first image;

determining a second reference point on the corresponding feature of interest in the second image.

registering the first image with the second image based on alignment of the first reference point with the second reference point; and

storing registration data corresponding to registration.

14. The method of claim 13, further comprising displaying the registration data in at least one of a cine serial display, an overlay in stack mode, and a composite image.

15. The method of claim 13, wherein the feature of interest and the corresponding feature of interest are an anomaly.

16. The method of claim 13, wherein the first reference point is the middle of the feature of interest; and the second reference point is the middle of the corresponding feature of interest.

17. The method of claim 13, wherein the first image and the second image are acquired in different temporal settings.

18. The method of claim 13, wherein segmenting is automated.

19. The method of claim 13, wherein registering is automated.

20. The method of claim 13, further comprising determining additional reference points and registering the first image with the second image based on the additional reference points.

21. A method for anchoring images, comprising:

identifying and sizing a feature of interest in a first image;

identifying and sizing a corresponding feature of interest in a second image;

locating a first reference point on the feature of interest;

locating a second reference point on the corresponding feature of interest;

registering the first image with the second image based on anchoring the first reference point with the second reference point; and

storing registration data corresponding to registration.

22. The method of claim 21, wherein one or more computer aided techniques are used to identify and size the feature of interest and the corresponding feature of interest.

23. The method of claim 21, wherein the feature of interest and the corresponding feature of interest are manually identified.

24. The method of claim 21, wherein the first reference point and the second reference point are location markers for the registration.

25. The method of claim 24, wherein registration comprises rigid body registration transformation.

26. The method of claim 25, wherein the rigid body registration transformation comprises at least one of a translation, a rotation, a magnification, and a shearing.

27. The method of claim 21, wherein registration comprises warped registration and at least one of an elastic transformation, a multi-scale approach, a multi-region approach, and a pyramidal approach.

28. The method of claim 21, wherein the registration comprises a combination of a rigid body registration and a warped registration.

29. The method of claim 21, further comprising accessing the registration data to compare the first image with the second image.

30. The method of claim 21, further comprising accessing the registration data to compare the feature of interest with the corresponding feature of interest.

31. The method of claim 30, further comprising displaying the registration data in at least one of a cine serial display, an overlay in stack mode, and a composite image.

32. A system for registering images comprising:

one or more imaging systems for acquiring and storing images;

a first interface for accessing, reviewing, processing, and registering the images;

a storage for storing image registration data; and

wherein registration of the images is based on alignment of corresponding features of interest in the images.

33. The system of claim 32, further comprising a second interface or monitor for displaying the registration data in at least one of a cine, a stack, an overlay, and a composite.

34. The system of claim 33, wherein the first interface and the second interface are the same interface and are a PACS workstation.

35. The system of claim 32, further comprising an analog to digital device or scanner for converting analog film images to digital images.

36. The system of claim 32, wherein the images are digital images and digitally-acquired images.

37. The system of claim 32, wherein the images are digitized images and scanned images.

38. The system of claim 32 wherein the one or more imaging systems are at least one of a conventional X-ray imaging system, a digital X-ray imaging system, a CT imaging system, and a MR imaging system.

39. A system for comparing images, comprising:

means for identifying a feature of interest in a first image;

means for identifying a corresponding feature of interest in a second image;

means for registering the feature of interest within the first image with the corresponding feature of interest within the second image; and

means for storing registration data corresponding to registration.

40. The system of claim 33, further comprising means for displaying the registration data.

41. The system of claim 40, further comprising means for displaying the registration data in at least one of a cine serial view, a stack mode, an overlay, and a composite.

42. A system for registering images, comprising:

means for segmenting a feature of interest in a first image;

means for segmenting a corresponding feature of interest in a second image;

means for registering the first image with the second image by aligning the feature of interest with the corresponding feature of interest; and

means for storing image data corresponding to registration.

43. The system of claim 42, further comprising means for displaying the image data corresponding to registration.

44. A system for aligning images, comprising:

means for segmenting a feature of interest in a first image;

means for segmenting a corresponding feature of interest in a second image;

means for determining a first reference point on the feature of interest in the first image;

means for determining a second reference point on the corresponding feature of interest in the second image;

means for registering the first image with the second image based on alignment of the first reference point with the second reference point;

means for storing registration data corresponding to registration; and

means for displaying the registration data.

45. A computer program, provided on one or more tangible media, for registering images, comprising:

a routine for identifying a feature of interest in a first image;

a routine for identifying a corresponding feature of interest in a second image;

a routine for registering the feature of interest within the first image with the corresponding feature of interest within the second image; and

a routine for storing registration data corresponding to registration.

46. The computer program of claim 45, further comprising a routine for displaying the registration data.

47. The computer program of claim 46, further comprising a routine for displaying the registration data in at least one of a cine serial view, a stack mode, an overlay, and a composite image.

48. A computer program, provided on one or more tangible media, for comparing images, comprising:

a routine for segmenting a feature of interest in a first image;

a routine for segmenting a corresponding feature of interest in a second image;

a routine for registering the first image with the second image by aligning the feature of interest with the corresponding feature of interest; and

a routine for storing image data corresponding to registration.

49. The computer program of claim 48, further comprising a routine for displaying the image data corresponding to registration.

50. A computer program for aligning images, comprising:

a routine for segmenting a feature of interest in a first image;

a routine for segmenting a corresponding feature of interest in a second image;

a routine for determining a first reference point on the feature of interest in the first image;

a routine for determining a second reference point on the corresponding feature of interest in the second image;

a routine for registering the first image with the second image based on alignment of the first reference point with the second reference point;

a routine for storing registration data corresponding to registration; and

a routine for displaying the registration data.